Bernalillo County's Decision Support System

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S ocrates argued that an unexamined life is not worth living. An administrator of a large jail today would do well to argue that an unsupported decision is not worth making-and sometimes it's downright dangerous.

The jail has always been one of society's most arcane institutions, and its operation is more complicated today than it has ever been. One of the management tools being fashioned by some of today's beleaguered jail administrators is the decision support system, an outgrowth of computerized management information systems.

A decision support system, or DSS, is an organized use of the computer's speed and ability to store, sort, and retrieve information to answer "what if. . ." questions.

This use of the computer is different from the management information system, or MIS, which issues routine reports and information used to implement decisions already made and to answer questions of fact, such as: "Is John Doe in jail? What is he charged with? Where is he housed? How much is his bond?" The distinction between these two systems may sometimes become blurred, but it is real, nevertheless.
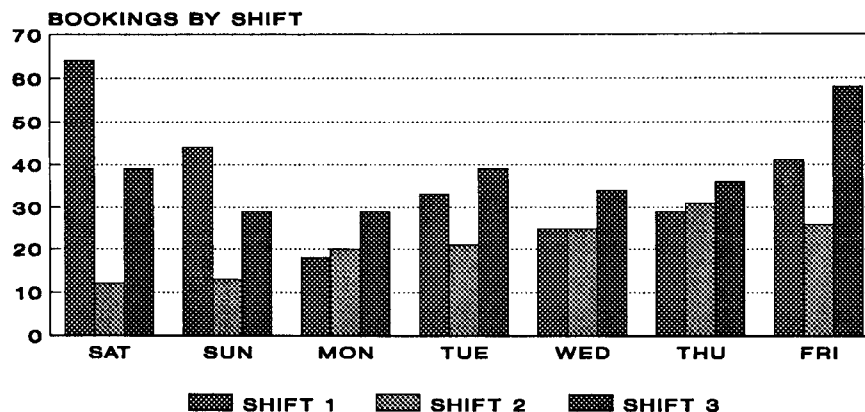
Uses of the DSS
At the Bernalillo County Detention Center (BCDC) in Albuquerque, New Mexico, the DSS is used to support decisions in the day-to-day operation of the jail, medium-range planning (e.g., budget), and long-range planning. Jail Director Ralph Ruiz also uses the system to provide information to policy makers and administrators of other criminal justice agencies to facilitate and support their decisions.

A major use of the system on a daily basis is in classification. Supervisors, who do initial classifications, and members of the Classification Committee, who do all reclassifications, make use of a computerized "keep-away" list, which details who must be kept away from whom. This use of the system helps prevent violent confrontations that can easily get out of hand in an overcrowded jail.

Booking summaries available from the DDS help corrections supervisors decide how many officers to assign to the booking area on their shifts and on certain days of the week. A supervisor may already have a good idea of this, but supporting data make the decision easier, faster, and more comfortable. (Figure 1)

FIGURE 1: BCDC AVERAGE DAILY BOOKINGS
JANUARY FY91

BOOKINGS BY SHIFT

SHIFT 1   SHIFT 2   SHIFT 3

Bernalillo County Detention Center budget and personnel managers make heavy use of the DSS. Personnel managers keep vacancy and turnover data to help them decide when to start the hiring process for new officers and when to schedule training for new and current employees. The budget division, always under pressure to keep expenses down, uses the system to do needs assessments and cost analyses.
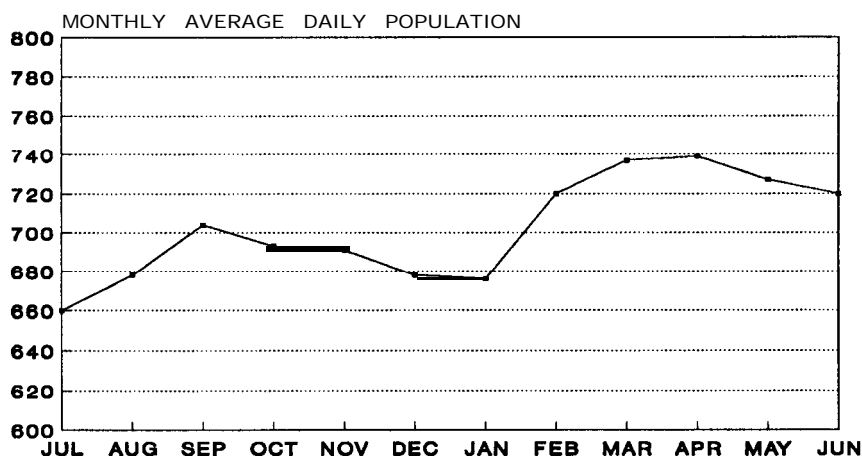
what If. . .

Both divisions use the DSS to answer "what if. . ." questions, such as: What would be the income yield if the county took more prisoners from paying jurisdictions? What would be the effect of a proposed state law to lower the legal blood alcohol contents of drivers from 0.1 to 0.08? What increased loses would result from cutting personnel in inmate property management? What savings could be anticipated from eliminating some positions through attrition?

The "what if" feature of the system allows for quick predictions of a jail's anticipated average daily population based on different rates of general population growth. Trend charts, which can show historical data in both straight line trends and fluctuation curves, can be very useful in projecting budgets, activity schedules, and seasonal changes.

For example, see Figure 2, which charts average daily populations by months for the past six fiscal years in Bernalillo County. The graph

FIGURE 2: BCDC ADP PATTERN BY MONTHS
AVERAGES FOR FY85 THROUGH FY90

MONTHLY AVERAGE DAILY POPULATION

reflects both the six-year increase trend and the fluctuations during those years. In this case, the July-through-June fiscal year profile shows two peaks, at the equinoxes, and two valleys, at the solstices. Awareness of this phenomenon can be very helpful to a supervisor in designing a vacation schedule that makes minimal use of overtime.

DSS in a Joint Powers Jail
A DSS is especially valuable to a joint powers jail like the Bernalillo County Detention Center, which is funded by both the county and the city of Albuquerque. The jail is administered by the city's Department of Corrections-Detention. The funding ratio is a frequent issue in budget cycles, and both city and county policy makers demand jail data that they think will favor them in setting funding ratios. Such data variables include: the ratio of arrests on city, county, state, and federal charges, lengths of stay

for misdemeanor and felony defendants, and number of those arrested by city police versus the sheriff's office. These questions, and others, determine what data are collected and stored, as well as how they are to be retrieved, and how often.

Systemwide Use of DSS Data
In addition, other elements in the criminal justice system often use data developed by the jail. In the local court system, the metropolitan court handles misdemeanants, and its pretrial services division processes nonfinancial releases of defendants charged with misdemeanors. Data on these releases have demonstrated an impact on jail population that has led the division to make some recommendations to the district court on lesser felony cases. The resulting increase in nonfinancial releases of felony defendants appears to be reducing jail days. Future data will tell.

If this metadata, or data about data, could be extended to all the criminal justice agencies in the jurisdiction and analyzed by a criminal justice coordinating committee, the benefits could be greater than most people imagine. Feedback from such an approach would provide a great deal of information not only about the criminal justice system but also about the society in which it is embedded.

That information, in turn, could certainly inform decisions about how to solve existing social problems. Such results are to be expected; feed-back changes a system and is the best guide for how it should change, or whether it should change.

This applies to information systems, too. We currently are collecting data about our local area network, such as down times, when and where they occur, the average down time, the causes, and the mean time between failures. These data will be used to effect changes in the system.

Jail Planning

One of the most important ways a jurisdiction can use a DSS is when it must build a new jail or annex. Because new construction is so expensive and the jurisdiction will have to live with its results a long time, decisions must be based on as much data as can be garnered.

One simple example: How shall jail space be allotted for classification categories? Figure 3, below, depicts percentages of inmates in our four major classifications. If such data have been collected over the years, the architect can design a building that will ensure proper space allot-ment. It may seem that no one would build a jail without this information, but many a jail administrator has discovered that the new structure has too many beds in one classification and not enough in another.

DSS Development Continues

Meanwhile, back at the jail, develop-ment of the DSS goes on. We still are far short of where we would like

to be, but much further along than where and when we started back in October 1988 under the guidance of a consultant. He recommended that we dedicate personnel, hardware, software, and time to designing a system based on our own needs for support information.

We began with a personal computer with a hard disk, connected to the network, with good spreadsheet and graphic programs, and one person (me) to develop the system. At the time, I both managed the planning and research unit and supervised classification. I was then assigned full time to planning and research to develop the DSS, and classification was reassigned.

I developed the DSS by building databases and reports designed to answer the questions most frequently asked. The mote reports issued, the more questions emerged, and vice versa. The usefulness of a DSS is limited by the use made of it. The more it's used, the more "what if" questions are generated.

The French poet Paul Valery said the world is constantly threatened by two forces: order and disorder. The DSS creates order by introducing disorder (new ways of using data). It's a good way to keep one's balance.

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FIGURE 3: BCDC CLASSIFICATION RATIOS

MEDIUM 36%
MINIMUM 30%
MAXIMUM 14%
SPECIAL MANAGEMENT 20%